

Introduction to Public Health Surveillance

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Lesson 1

Overview of Public Health Surveillance



Objectives for Lesson 1

- Define elements of public health surveillance
- Describe categories of public health surveillance
- Describe purposes of public health surveillance
- Describe uses for public health surveillance
- List future considerations for public health surveillance



Elements of Surveillance

- ✓ Collection
- ✓ Analysis
- ✓ Interpretation
- ✓ Dissemination



Components of Public Health Practice

- Surveillance
- Research: epidemiological, behavioral, and laboratory
- Service (program evaluation)
- Training



The Term “Public Health Surveillance”

- Describes the scope (surveillance)
- Indicates the context in which the event occurs (public health)

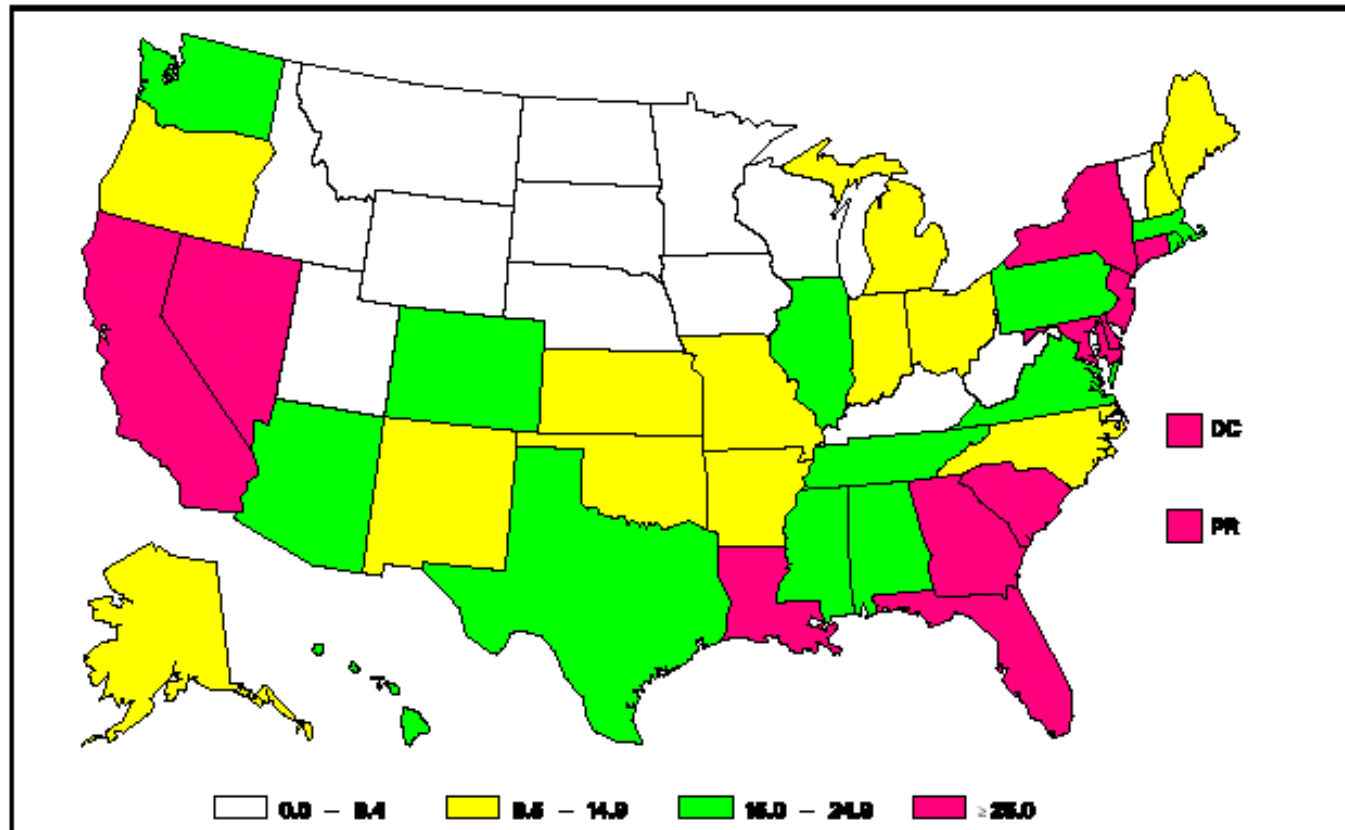


Purposes of Public Health Surveillance Data

- Assess status
- Define position
- Monitor and evaluate programs
- Conduct research
- Identify problems

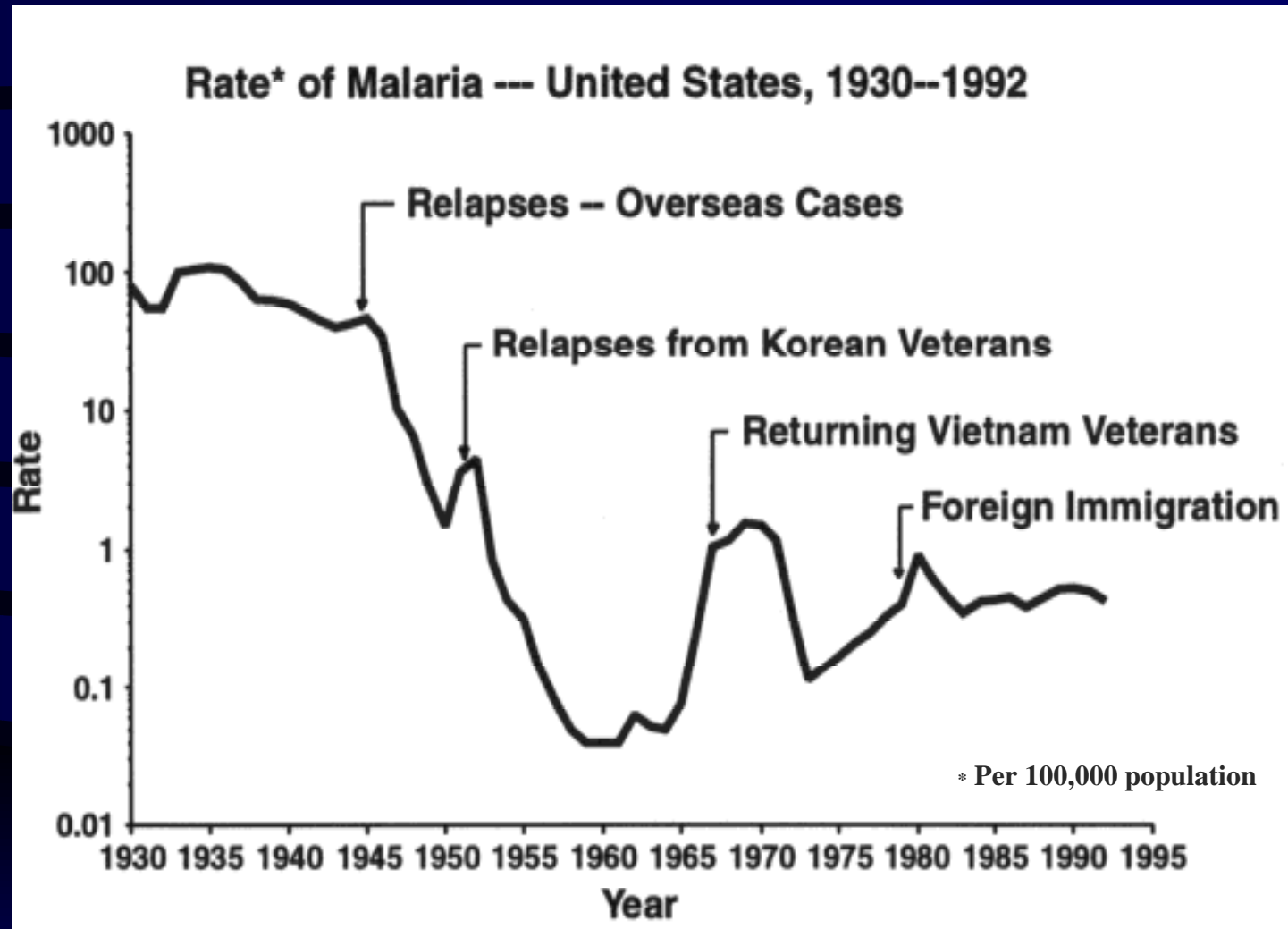


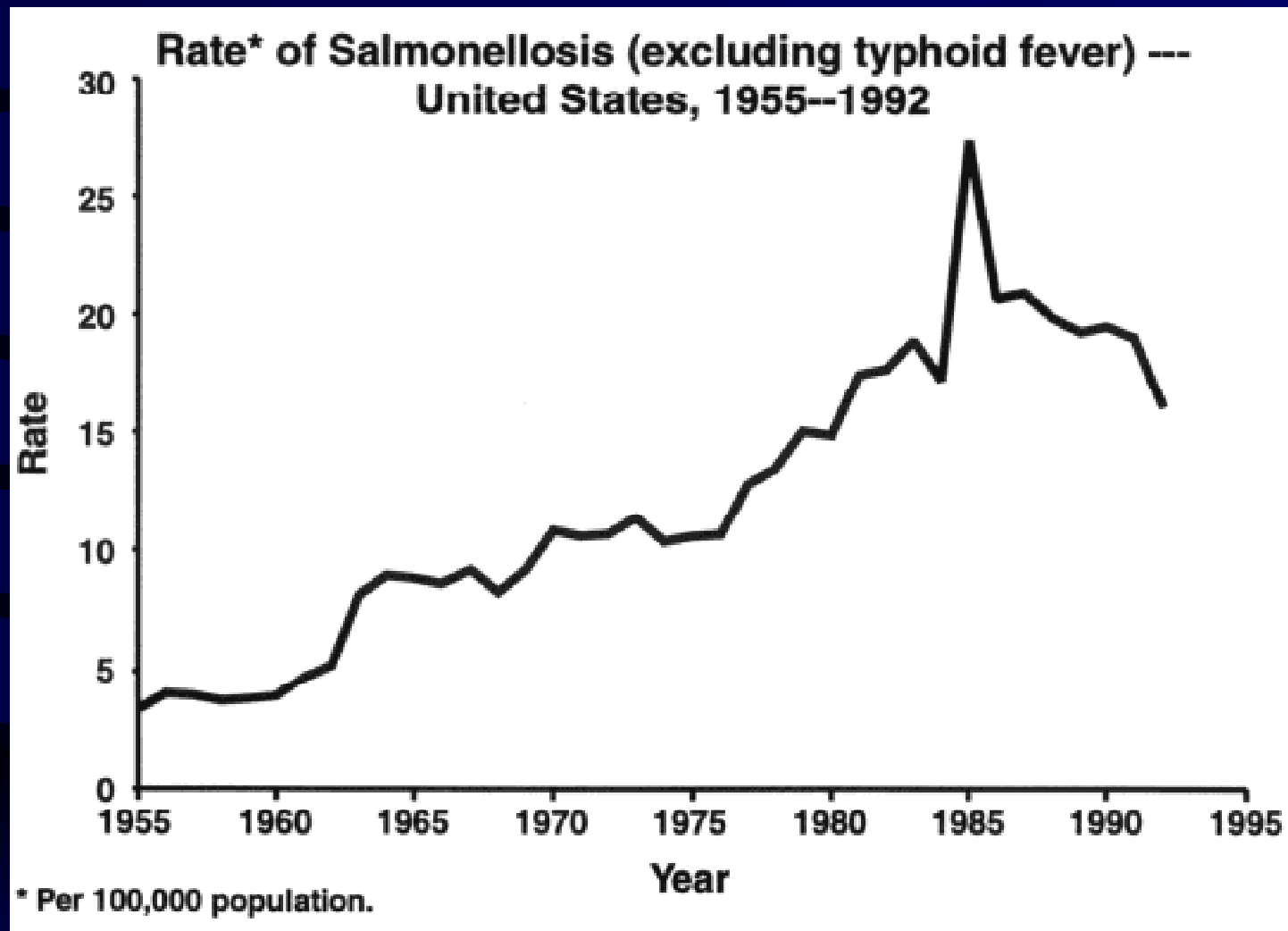
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) — reported cases, per 100,000 population, United States and Puerto Rico, 1995*



*The denominator for Puerto Rico is based on extrapolations from U.S. Bureau of Census population data from 1990 and 1992 post-censal estimates.

In 1995, the highest rates of AIDS cases per 100,000 were reported in the northeastern, southeastern, and western states. Eighty-two percent (82%) of reported AIDS cases occurred among residents of large metropolitan areas (i.e., areas of ≥250,000 persons).





Salmonellosis Rates by County New Hampshire and Contiguous NETSS States

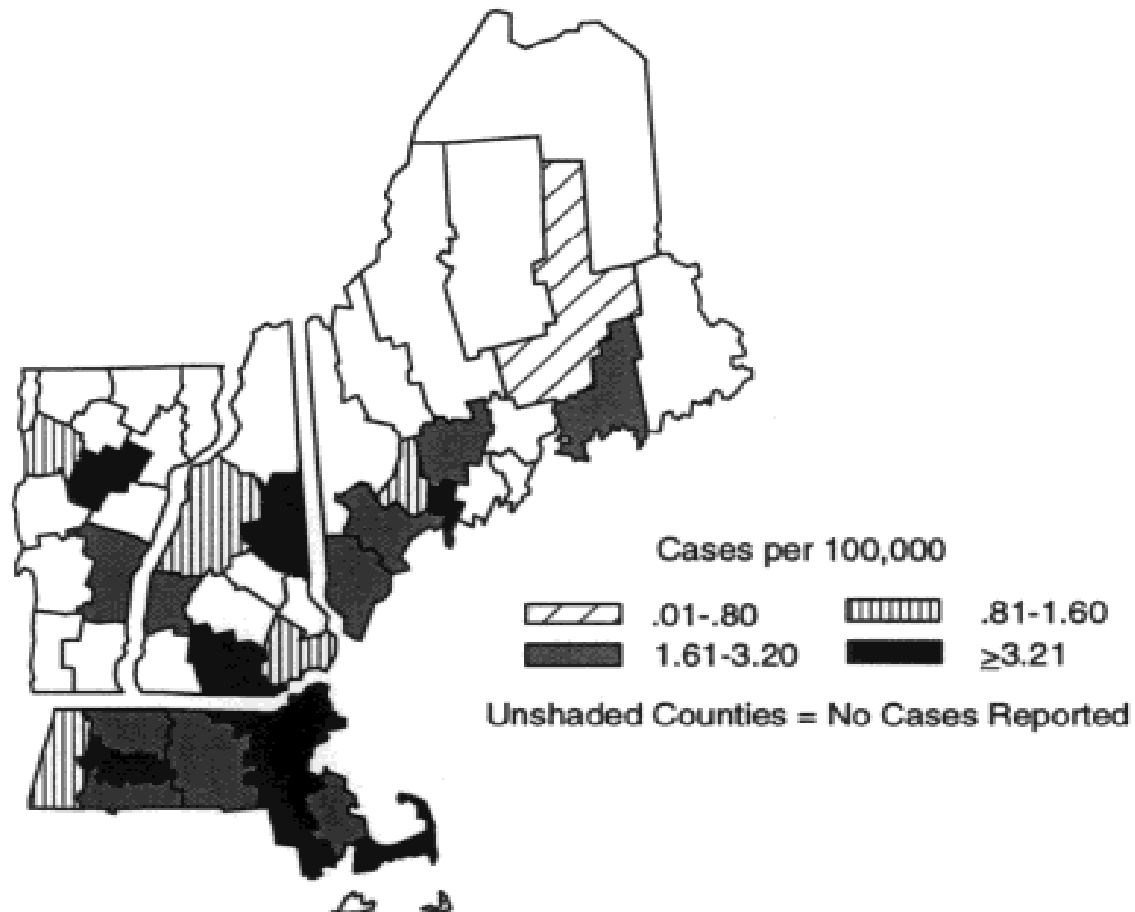


FIGURE 5. Deaths due to nasal cancer (ICDA 160), white males, ages 65 and over, 1972-1974

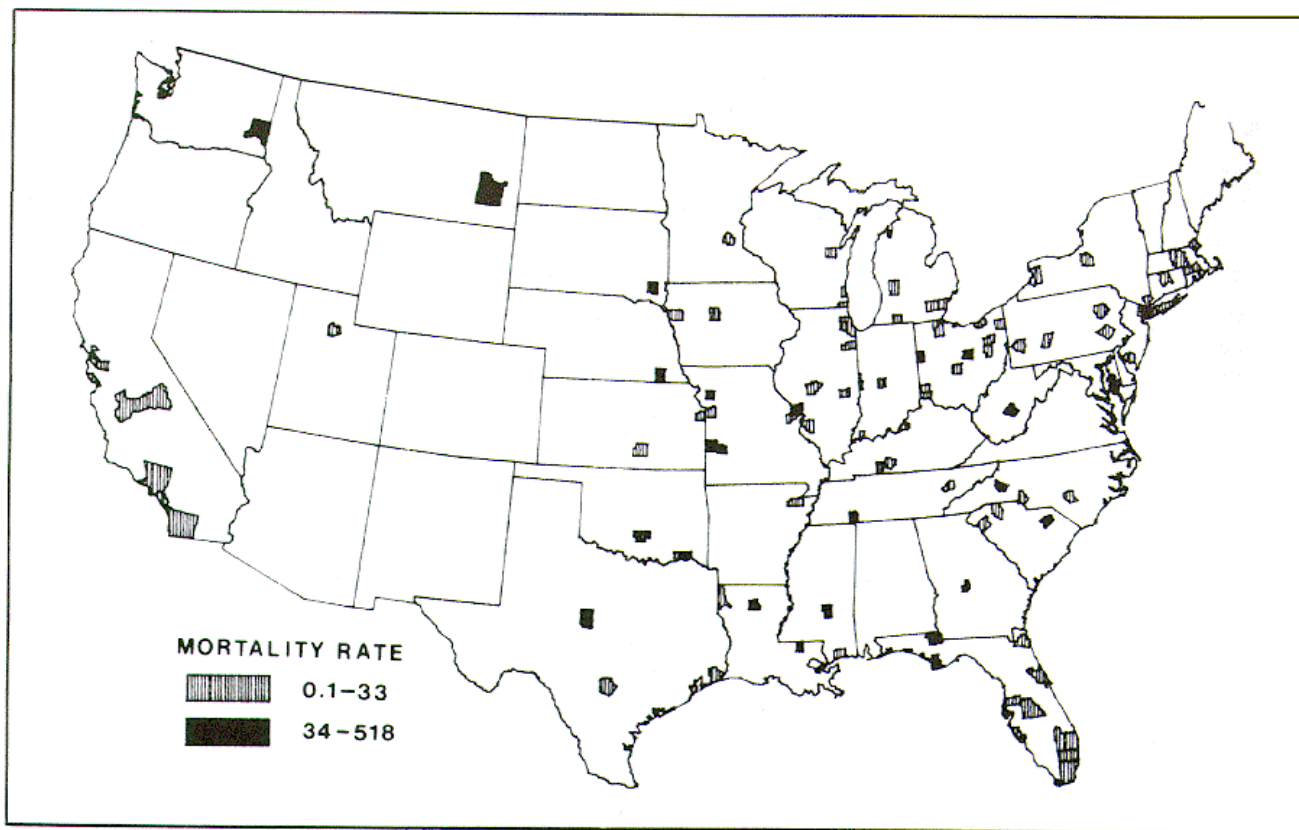
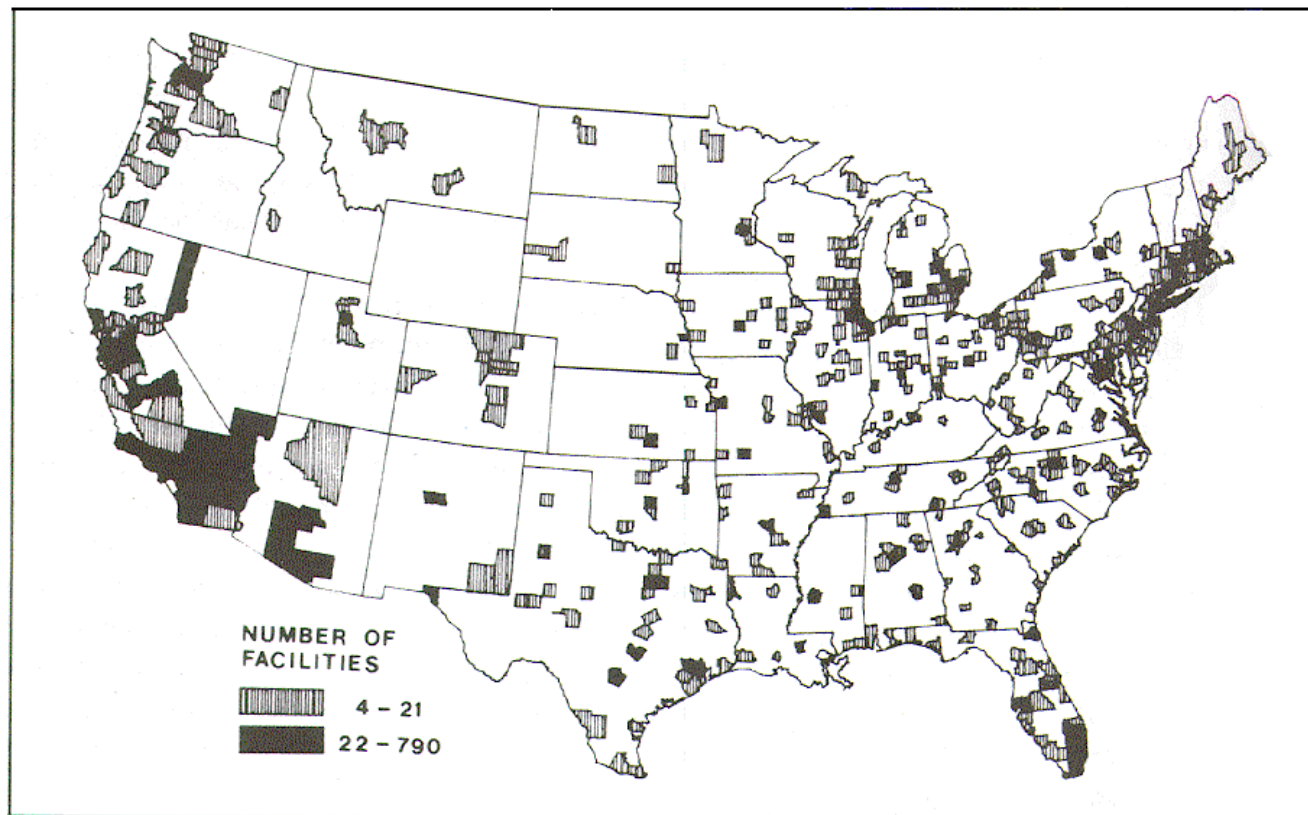
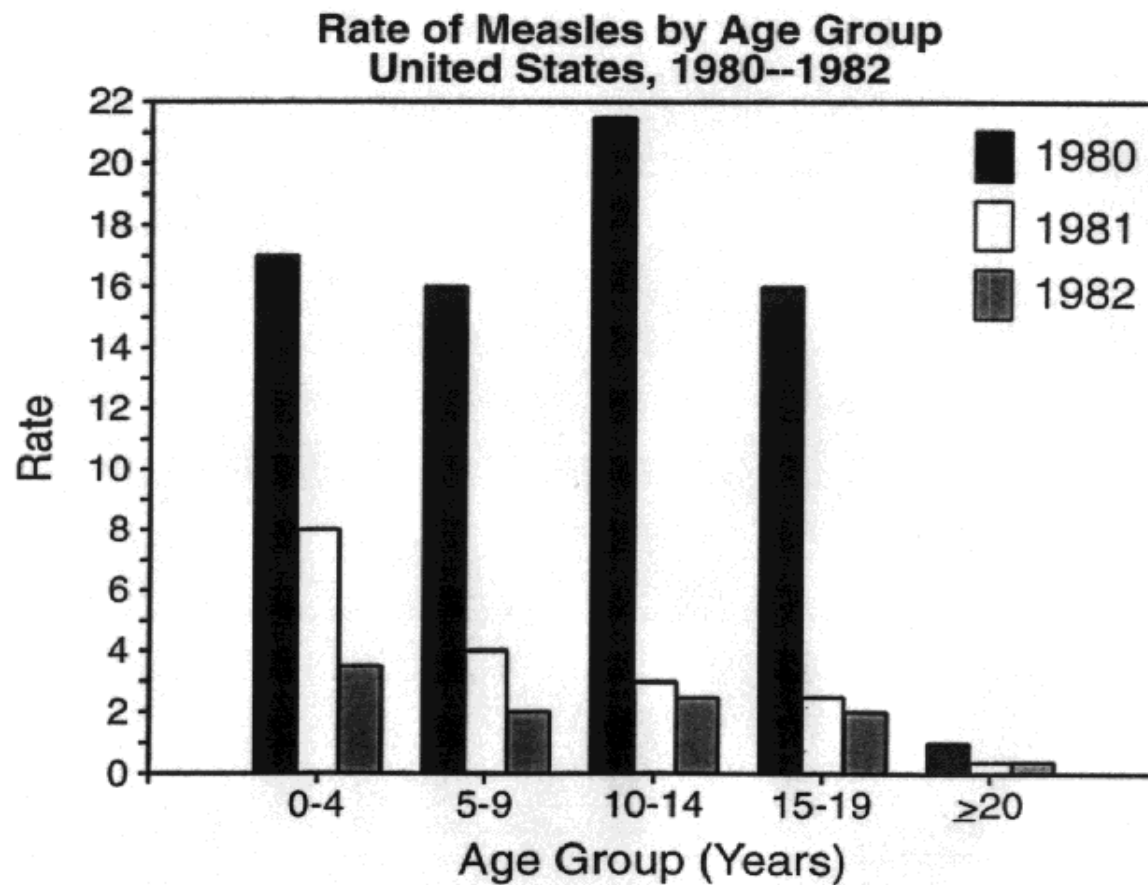
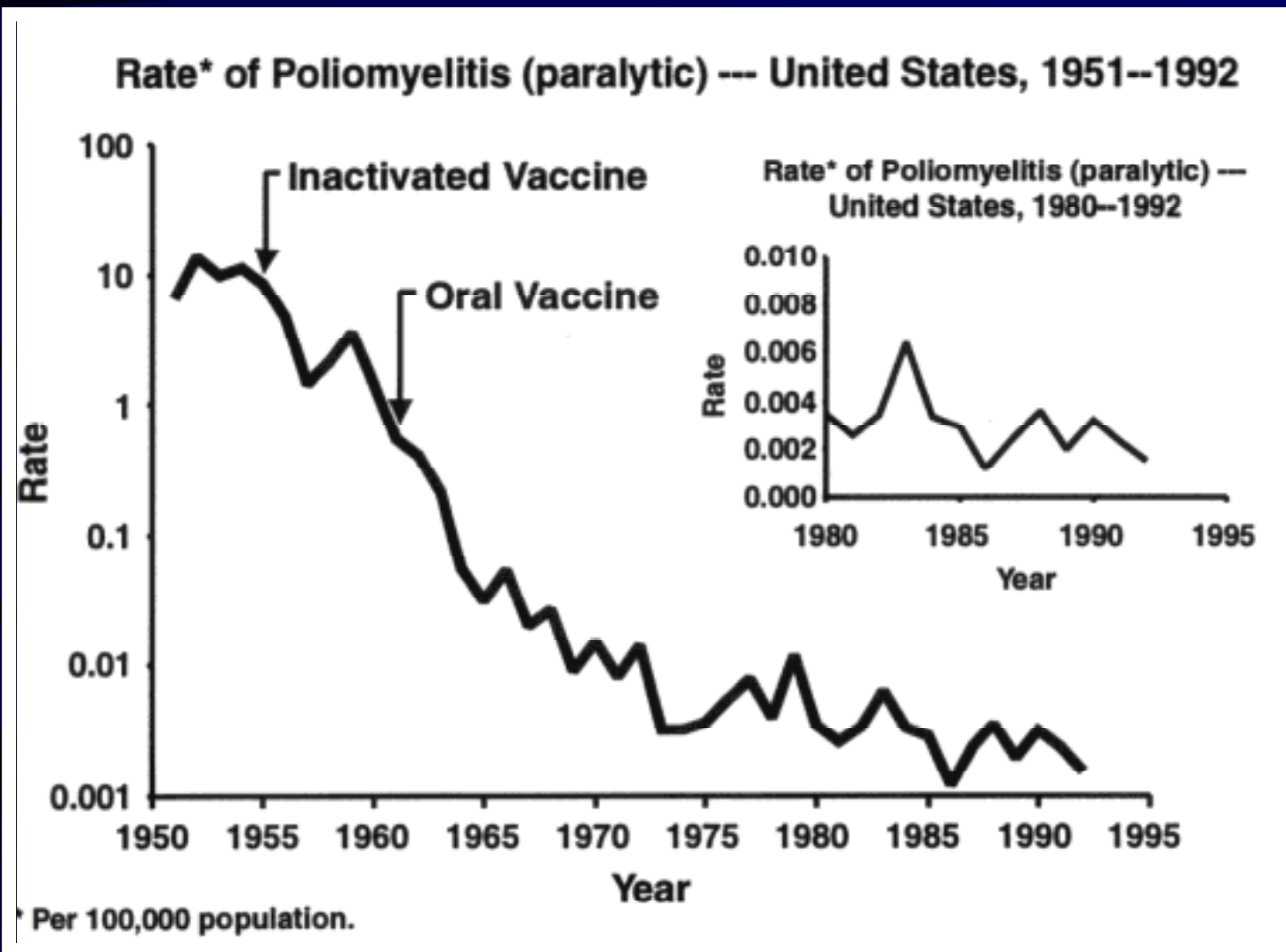


FIGURE 1. Distribution of facilities where workers are potentially exposed to formaldehyde (in 10% or more of the workforce)





* Per 100,000 population. Rates estimated by extrapolating age distribution of patients with known age reported to the entire number of reported cases.



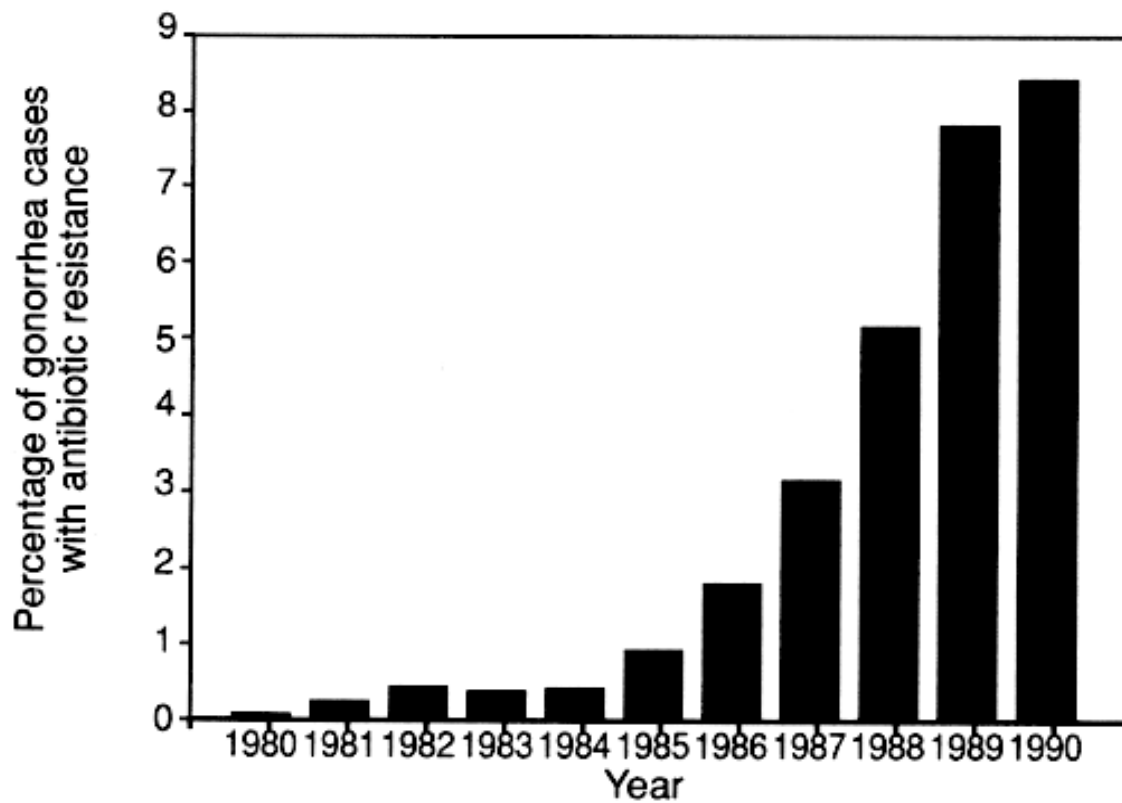
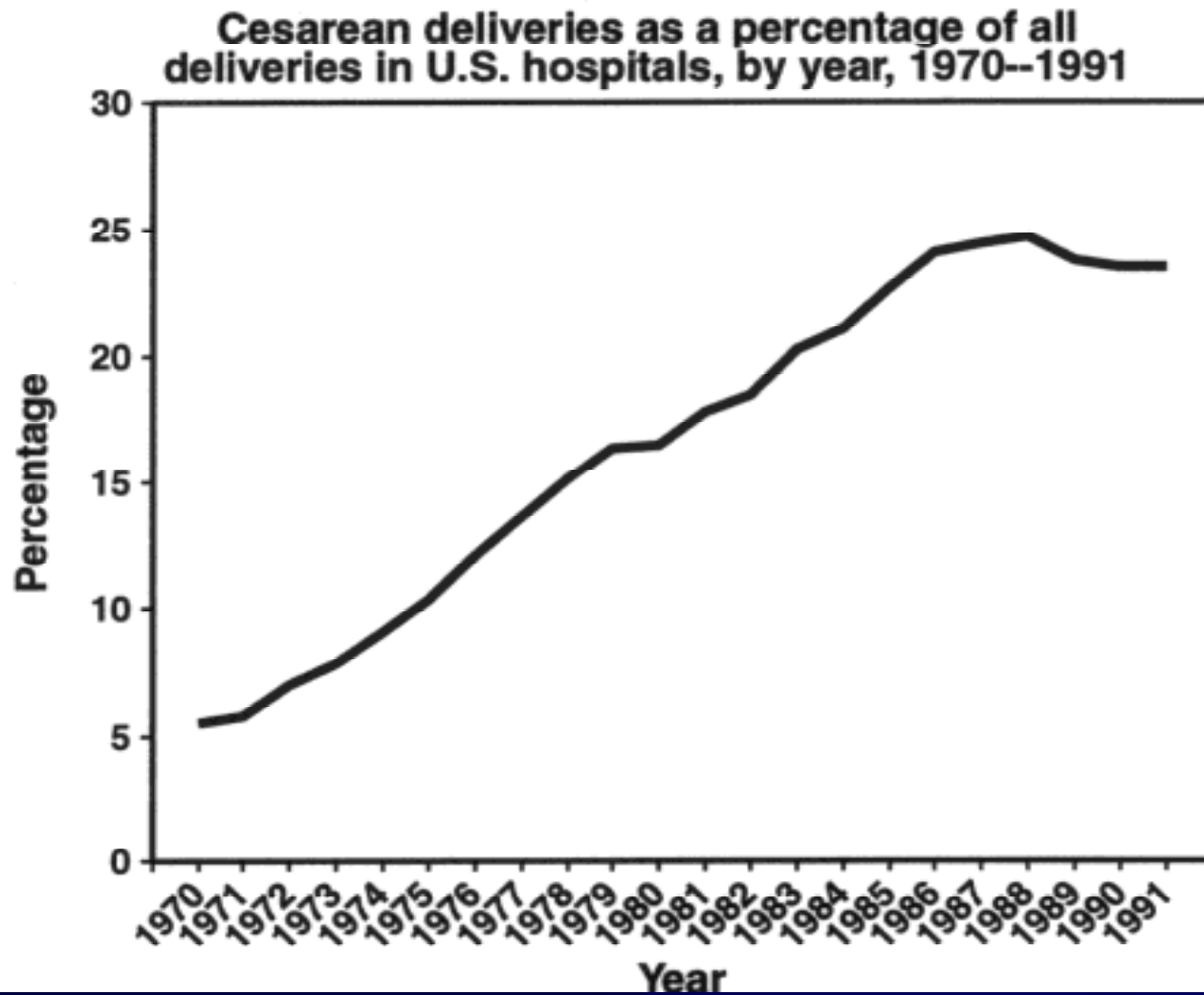


Figure 1-7 Percentage of reported cases of gonorrhea caused by antibiotic-resistant strains—United States, 1980–1990.



Future Considerations

- Computer
- Epidemiological and statistical analysis
- Electronic mail
- Application to new areas
- Surveillance as a scientific endeavor
- Use by scientists and policy makers
- Decentralization



Critical Challenges

- Assurance of usefulness
- Computer technology
- Ethical and legal concerns
- Application to new areas
- Educate public and policy makers
- Flexibility
- Cost effective

